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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/034,609

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John H. Hughes JR.

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08/08/2006

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EXAMINER

BOAKYE, ALEXANDER O

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,609

Applicant(s)

HUGHES ET AL.

Examiner

ALEXANDER BOAKYE

Art Unit

~~2607~~ 2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-32, 34-39, 41-61 and 63-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2-23, 41-61, 63-83 is/are allowed.
- 6) ☒ Claim(s) 24-32 and 34-39 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/05/005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Welin (US Patent # 6,975,629).

Regarding claim 24, Welin teaches a packet reordering system (Fig. 11) comprising: a packet reorder buffer (column 23, lines 51-52); and a 'head-of-line' pointer (column 23, lines 51-61).

Regarding claim 25, Welin teaches a packet receiving unit coupled to the packet reordering system (Fig. 11), the packet receiving unit (Packet Buffer 1181 of Fig. 11 corresponds to the claimed packet receiving unit) is configured to receive a plurality of packets (column 23, lines 51-52).

Regarding claim 26, Welin teaches a packet forwarding unit coupled to the packet reordering system, the packet forwarding unit is configured to forward the plurality of packets (Decoder 1171 of Fig.11 corresponds to the claimed packet

forwarding unit since plurality of packets are forwarded to destination by decoder 1171 as indicated in Fig. 11).

2. Claims 32-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Dyckerhoff et al. (US Patent # 7,016,367).

Regarding claims 32 and 33, Dyckerhoff teaches a network element (Fig. 2) comprising: a processor (210 of Fig. 2 corresponds to the claimed processor); the claimed processor corresponds to sprayer); the processor is configured to receive a plurality of incoming packets (column 4, lines 23-25) ; separate the plurality of incoming packets into a plurality of subsets of incoming packets (column 4, lines 25-26; Sprayer separates packet streams into a plurality of subsets), wherein the plurality of incoming packets is separated according to a plurality of characteristics of the plurality of incoming packets (column 4, lines 25-25; the claimed plurality of characteristics of incoming packets are inherent in the packet header since packet headers identify characteristics of the incoming packets); and forward the plurality of subsets of incoming packets in a second order (column 4, lines 27-34 ; the claimed first order and second order is inherent in the network device of Dyckerhoff; packets processors analyze the contents of a packets to identify the output port is indicator of packet characteristics inherent in the packet streams).

Regarding claim 34, Dyckerhoff teaches that incoming packets in each of the plurality of subsets of incoming packets are forwarded in an order that the incoming packets are received (column 4, lines 27-34).

Regarding claim 35, Dyckerhoff teaches that one of the plurality of characteristics is a destination address of the plurality of incoming packets (the claimed destination address of the plurality of incoming packets is contained in the packet header of the packet streams as evidenced).

Regarding claim 36, Dyckerhoff teaches that one of the plurality of characteristics is a source address of the plurality of incoming packets (the claimed source address is contained in the packet header of the packet stream as evidenced by Dyckerhoff).

Regarding claim 37, Dyckerhoff teaches that one of the plurality of characteristics is a protocol used by the plurality of incoming packets (the claimed protocol is inherent in router packet control and ordering system since plurality of packets enter the router).

Regarding claim 38, Dyckerhoff teaches that one of the plurality of characteristics is an address of at least one incoming port used by the plurality of incoming packets (the claimed address is inherent in the packet header).

Regarding claim 39, Dyckerhoff teaches that one of the plurality of characteristics is an address of at least one outgoing port used by plurality of incoming packets (the claimed address is inherent in the packet header).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welin (US Patent # 6,975,629) in view of Magnussen et al. (US Patent # 6,977,940).

Regarding claim 27, Welin teaches a processor coupled to the packet reordering system (Fig. 11). What Welin fails to disclose is a processor configured to determine a plurality of hash values using information contained in the plurality of packets, and store the plurality of hash values and the plurality of packets in the packet reorder buffer. However, Magnussen teaches a processor configured to determine a plurality of hash values using information contained in the plurality of packets (column 4, lines 28-46), and store the plurality of hash values (plurality of hash values are stored in the hash table 408 of FIG. 4). One of ordinary skill in the art would have been motivated to incorporate plurality of hash values into the communication network in order to verify packet identification. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate hash values into the communication network of Welin with motivation being that it provides capability for the system identify packet identification entries.

Regarding claim 28, Welin teaches a network interface coupled to the processor (computer interface is coupled to Host Processor as shown in Fig. 1).

Regarding claim 29, Welin teaches that the network interface comprising the packet receiving and packet forwarding (column 23, lines 51-52; the claimed packet forwarding reads on decoder 1171 of Fig. 11).

Regarding claim 30, Welin teaches a memory coupled to the processor, the memory stores a lookup table (see Fig 1).

Regarding claim 31, Welin teaches a cache coupled to the processor (The claimed cache, inherent in DSP status buffer is coupled to the host processor 1115 of Fig. 1).

Allowable Subject Matter

4. Claims 2-23, 41-61 and 63-83 are allowable.

The following is a statement of reasons for the indication of allowable subject matter: As to claims 2-23, the prior art of record does not teach determining a plurality of hash values using information contained in the plurality of packets; storing the plurality of hash values in the packet reorder buffer; and using the plurality of hash values to determine the second order. As to claims 41-61, the prior art of record does not teach means for determining a plurality of hash values using information contained in the plurality of packets; storing the plurality of hash values in the packet reorder buffer; and using the plurality of hash values to determine the second order. As to claims 63-83, the prior art of record does not teach determine a plurality of hash values using information contained in the plurality of packets; storing the plurality of hash values in the packet reorder buffer; and using the plurality of hash values to determine the second order.

Response to Arguments

5. Applicant's arguments with respect to claims 2-32,34-39,41-61 and 63-83 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The fax number is (571) 273-8300. Any inquiry of general nature or relating to the status of this application or proceeding should be directed to Electronic Business Center numbers 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner

AB

7/21/06



CHI PHAM
SUPERVISORY PATENT EXAMINER